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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO.       |
|--|-------------|----------------------|---------------------|------------------------|
| 09/818,123   | 03/27/2001  | Frank Sauer          | 2001P05535US        | 8633                   |
| 7590   | 08/25/2005  |                      | EXAMINER            |                        |
| Siemens Corporation<br>Intellectual Property Department<br>186 Wood Avenue South<br>Iselin, NJ 08830 |             |                      |                     | GOOD JOHNSON, MOTILEWA |
|  |             | ART UNIT             |                     | PAPER NUMBER           |
|  |             | 2677                 |                     |                        |

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                     |
|------------------------------|--------------------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b>               | <b>Applicant(s)</b> |
|                              | 09/818,123                           | SAUER, FRANK        |
|                              | Examiner<br>Motilewa A. Good-Johnson | Art Unit<br>2677    |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 23 June 2005.

2a) This action is **FINAL**.                                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 31-40 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 31-40 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) Notice of References Cited (PTO-892)  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) Notice of Informal Patent Application (PTO-152)  
6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 31-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Simon, U.S. Patent Number 6,470,207.

Regarding claim 31, Simon discloses a method for augmented reality guided positioning of an instrument tip within a target located in an object comprising the steps of: presenting an augmented reality view by overlaying a virtual graphics guide onto a real view of the object and an instrument (col. 9, lines 16-50, see also figure 10), the graphics guide comprising a virtual depth marker located outside of the object (col. 9, lines 51-56); aligning the instrument to the graphics guide (col. 11, lines 30-35); inserting the instrument to a depth determined in the augmented view by alignment of a predetermined portion of the instrument with the virtual depth marker (col. 9, lines 51-65)

Regarding claim 32, determining an optimal location for the instrument with respect to the target (col. 12, lines 63-65); calculating the proximity of the predetermined

portion of the instrument to the target based on the optimal location and the geometry of the instrument (col. 12, lines 25-45); using the proximity calculation to determine the position of the virtual depth marker on the graphics guide (col. 7, line 66 - col. 8, lines 1)

Regarding claim 33, Simon discloses the proximity calculation comprises a range a proximity measurements (col. 7, lines 45-65)

Regarding claim 34, Simon discloses the proximity calculation corresponds to a final forward position of the predetermined portion of the instrument with respect to the target (col. 9, lines 25-28)

Regarding claim 35, Simon discloses the proximity calculation corresponds to a distance between the virtual depth marker and a point within the target (col. 9, line 51 – col. 10, lines 9)

Regarding claim 36, Simon discloses an apparatus for augmented reality guided instrument positioning of an instrument tip within a target located in an object comprising: a virtual graphics guide generator and positioned for generating and positioning a virtual graphics guide (figure 10), the graphics guide comprising a virtual depth marker located outside of the object; and a rendering device (120, computer, which Examiner interprets as a rendering device) for rendering the virtual graphics

guide onto a real view of the object and an instrument (col. 8, lines 30-36) such that the instrument can be inserted to a depth determined in the augmented view by alignment of a predetermined portion of the instrument with the virtual depth marker (col. 9, lines 16-25)

Regarding claim 37, wherein said virtual graphics guide generator and positioned determines an optimal location for the instrument with respect to the target (col. 12, lines 63-65), and calculated the proximity of said predetermined portion of the instrument to the target based on the optimal location and the geometry of the instrument (col. 12, lines 25-45)

Regarding claim 38, the proximity comprises a range of proximities and said virtual graphics guide generator and position determined an optimal range of locations for the predetermined portion of the instrument with respect to the target (col. 7, lines 45-65) and calculates the range of proximities of the predetermined portion of the instrument to the target based on the optimal range and the geometry of the instrument (col. 9, line 51 – col. 10, lines 9)

Regarding claim 39, Simon discloses the proximity corresponds to a final forward position of the predetermined portion of the instrument with respect to the target (col. 9, lines 25-28)

Regarding claim 40, Simon discloses a display device (121, col. 8, lines 31-33) to display the augmented view rendered by the rendering device to the user.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Motilewa A. Good-Johnson whose telephone number is (571) 272-7658. The examiner can normally be reached on Monday, Tuesday and Thursday 9:00 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Motilewa A. Good-Johnson  
Examiner  
Art Unit 2677

mgj

*Sumati Lefkowitz*  
SUMATI LEFKOWITZ  
SUPERVISORY PATENT EXAMINER